Anti-NMDAR Antibody Encephalitis Presenting with Psychosis in an Adolescent Girl with Ovarian Teratoma: Case Report and Systematic Review

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Background

• Teratomas are rare germ cell tumors (95% of ovarian germ cell tumors).
• Anti-NMDAR encephalitis: autoimmune encephalitis, common in young females.
• Psychiatric misdiagnosis delays treatment.

Case

• Female, 16 year/old.
• Initial Dx: stress reaction → hallucinations, catatonia.
• Antipsychotics ineffective.
• MRI/CT brain normal.
• Pelvic US & MRI → 9×7×6 cm left ovarian teratoma.
• Surgery: immature teratoma (Grade II).
• Post-op + IVIG/steroids → improved in 3 weeks.

Systematic Review

• PubMed search (teratoma, psychosis, NMDAR encephalitis).
• 132 studies → 61 included.
• Table with selected case reports/cohort studies.

Discussion

• Psychiatric misdiagnosis is common.
• Some patients are antibody-negative (seronegative).
• Early tumor screening + excision crucial.
• Combined immunotherapy and surgery give best outcomes.

Conclusion

• Consider anti-NMDAR encephalitis in adolescent females with acute psychosis.
• Imaging for ovarian teratoma is essential even if antibody panels are negative.
• Early multidisciplinary management improves prognosis.

References: Voice et al. 2017; Tuzun et al. 2009; Nha et al. 2025; Zhang et al. 2024; Xu et al. 2022; Li et al. 2021